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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/666,271	09/20/2000	TOSHIYUKI SEKIYA	35.C14800	8367

5514 7590 11/01/2004

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EXAMINER

PHAM, HAI CHI

ART UNIT PAPER NUMBER

2861

DATE MAILED: 11/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/666,271

**Applicant(s)**

SEKIYA ET AL.

**Examiner**

Hai C Pham

**Art Unit**

2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10, 16, 17 and 19-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 5, 6, 8, 10, 16, 17 and 19-23 is/are rejected.
- 7) ☒ Claim(s) 2, 4, 7 and 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### ***Response to Amendment***

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

3. Claims 1-10, 16-17 and 19-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

#### Claims 1, 3, 6, 8, 16, 20:

- The following limitation "for correcting light emission characteristic dispersion of each recording element by means of an *average value of a recording driving time of each recording element of said recording element array*" as recited in each of the base claims appears to be vague and misleading in that the adjusted recording driving time of each recording element may be construed as being calculated by taking an average of the recording driving time of all the recording elements in the array, which does not truly reflect the essence of the current invention wherein the adjusted recording driving time of each recording element is deduced from an average value of the light emission quantity of corresponding recording elements

Art Unit: 2861

in two consecutive lines as stored in the driving correction table. However, the following rejection of the above mentioned claims will be based on the specification of the current invention until the applicant corrects the claimed language.

Claims 2, 4, 7, 9, 17, 19, 21-23 are dependent from claims 1, 3, 6, 8, 16, 20 above, and are therefore indefinite.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 3, 5-6, 8, 10, 16-17, 19-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamakawa et al. (U.S. 4,596,995) in view of Bogart et al. (U.S. 6,452,696).

Yamakawa et al. discloses a recording control apparatus, which performs recording on a recording medium by using the recording head (31), which includes at least one recording element array (LED array 31a-31n) aligned along a predetermined direction, a driving correction table (correction value memory 44, Fig. 15), which includes pixel correction data (52) for correcting a recording driving characteristic of each recording element by the pixel unit of image data (41), and in which the pixel correction

Art Unit: 2861

data is provided corresponding to plural lines of the image data in a sub-scan direction (the correction value memory 44 storing a frame of the correction data corresponding to one frame of image data stored in the video RAM 40), and a driving control means (control circuits 33a-33n) for correcting light emission characteristic dispersion of each recording element of the recording element array by modifying the recording driving time by the pixel unit according to the switching of the correction data for each line based on the driving correction table including the pixel correction data of the plural lines (the correction value memory 44 supplying the correction data of one frame to the control circuits 33a-33n, which modify the recording driving time, e.g., ON times, of each LED in the array in accordance with the corrected video data) (see discussions of the seventh embodiment starting at col. 16).

However, Yamakawa et al. fails to teach the corrected recording driving time being based on an average value deduced from the correction memory.

Bogart et al. discloses a method an apparatus for controlling multiple light emitting elements in a digital printer, wherein a correction factor for each light emitting element of the printing head is calculated by taking an average density from plural lines in the test pattern so as to provide the corrected exposure time for each light emitting element (Fig. 6).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to provide the device of Yamakawa et al. with the corrected recording driving time based on the average of the densities of the plural horizontal lines as taught by Bogart et al. The motivation for doing so would have been to drive the light

Art Unit: 2861

emitting elements to output light of intensity appropriate to produce a uniform image density over a wide range of image densities as suggested by Bogart et al.

With regard to claims 5, 10, 19, 23, Yamakawa et al. teaches the recording element array including at least one LED array (LED array 31a-31n).

With regard to claims 17, 21, Yamakawa et al. teaches the driving means changing a driving pulse width of each of the recording elements (Fig. 13).

### ***Allowable Subject Matter***

6. Claims 2, 4, 7 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter: the primary reason for the indication of the allowability of claims 2, 4, 7 and 9 is the inclusion therein, in combination as currently claimed, of the limitations corresponding the correction pixel designation means and the correction queue designation means for designating the pixel correction data of each line based on which the driving time calculation means calculates the corrected recording driving time for each recording element, which are not found taught the prior art of record considered alone or in combination.

Art Unit: 2861

***Response to Arguments***

8. Applicant's arguments with respect to claims 1, 3, 6, 8, 10, 16-17 and 19-23 have been considered but are moot in view of the new grounds of rejection as presented in this Office action.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai C Pham whose telephone number is (571) 272-2260. The examiner can normally be reached on M-F 8:30AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**HAI PHAM  
PRIMARY EXAMINER**

October 28, 2004